

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1- 31. (Canceled)

32. (Currently Amended) A system for using outside ventilation air to maintain indoor comfort and air quality, comprising:

a sensor system for detecting outdoor and indoor air temperatures;

an air delivery system for delivering the outside ventilation air to an interior space; and

a programmable controller, operably connected to the sensor system and the air delivery system, ~~that:~~that includes:

a recovery element that receives an outdoor air temperature and an indoor air temperature detected by the sensor system;

a storage element that stores the detected outdoor air temperature and the detected indoor air temperature detected by the sensor system;

a calculating element that automatically calculates a predicted indoor temperature range and a predicted outdoor temperature range based on the stored outdoor air temperature and the stored indoor air temperature; and

a regulating element that automatically regulates operation of the air delivery system as a function of predicted indoor and outdoor air temperature ranges and a predetermined indoor air temperature range.

33. (Previously Presented) The system of claim 32, further comprising a user interface that displays the predicted and predetermined indoor air temperature ranges and is operably connected to the controller.

34. (Previously Presented) The system of claim 32, further comprising a communication link connected to the controller for connection to an outside data source.

35. (Previously Presented) The system of claim 34, wherein the communication link obtains a weather prediction.

36. (Previously Presented) The system of claim 32, wherein the controller regulates an indoor air temperature at which cooling by the outside ventilation air is discontinued based on predicted temperatures.

37. (Previously Presented) The system of claim 32, wherein the controller regulates an airflow rate based on predicted temperatures.

38. (Previously Presented) The system of claim 33, wherein the controller regulates an airflow rate based on the desired indoor air temperature range.

39. (Previously Presented) The system of claim 32, wherein the controller controls an airflow rate of the outside ventilation air in proportion to a cooling demand.

40. (Previously Presented) The system of claim 32, wherein the controller controls the air quality by regulating a volume of the outside ventilation air delivered by the air delivery system.

41. (Currently Amended) The system of claim 32, ~~further comprising wherein the~~
air delivery system further comprises a vapor compression air conditioner, conditioner
operably connected to the controller, wherein the controller operates the vapor compression air
conditioner during early morning hours to pre-cool a building.

42. (Previously Presented) The system of claim 34, wherein the controller regulates operation of the air delivery system based on information received from the outside data source over the communication link.

43. (Previously Presented) The system of claim 32, wherein the controller activates the air delivery system when the outdoor air temperature is lower than the indoor air temperature.

44. (Previously Presented) The system of claim 32, wherein the air delivery system includes at least one of a vapor compression unit and an evaporative cooling unit to cool the outside ventilation air.

45. (Withdrawn-Currently Amended) A method of maintaining indoor air comfort and air quality ~~with the~~ with a system of claim 32 connected to an interior space, having,

a sensor system for detecting outdoor and indoor air temperatures;

an air delivery system for delivering the outside ventilation air to an interior space; and

a programmable controller, operably connected to the sensor system and the air delivery system, that includes:

a recovery element that receives an outdoor air temperature and an indoor air temperature detected by the sensor system;

a storage element that stores the detected outdoor air temperature and the detected indoor air temperature detected by the sensor system;

a calculating element that automatically calculates a predicted indoor temperature range and a predicted outdoor temperature range based on the stored outdoor air temperature and the stored indoor air temperature; and

a regulating element that automatically regulates operation of the air delivery system as a function of predicted indoor and outdoor air temperature ranges and a predetermined indoor air temperature range, the method comprising:

detecting an outdoor air temperature and an indoor air temperature;

storing the detected outdoor air temperature and the detected indoor air temperature;

calculating a predicted indoor temperature range and a predicted outdoor temperature range based on the stored outdoor air temperature and the stored indoor air temperature; and

regulating operation of an air delivery system to deliver outside ventilation air ~~into the~~ into an interior space as a function of the predicted indoor and outdoor air temperature ranges and the predetermined indoor air temperature range.

46. (Withdrawn) The method of claim 45, further comprising inputting a desired indoor air temperature through a user interface.

47. (Withdrawn) The method of claim 45, further comprising connecting the controller to an outside data source via a communication link.

48. (Withdrawn) The method of claim 47, further comprising obtaining a weather prediction via the communication link.

49. (Withdrawn) The method of claim 45, further comprising regulating an indoor air temperature by controlling movement of outside ventilation air based on predicted temperatures.

50. (Withdrawn) The method of claim 45, further comprising activating at least one of a vapor compression unit and an evaporative cooling unit to cool outside ventilation air.

51. (Withdrawn) The method of claim 45, further comprising activating the air delivery system when the outdoor air temperature is lower than the indoor air temperature.